WHAT IS CLAIMED IS:

1. A transgenic rodent characterized by expression of a first transgenic nucleotide sequence encoding a human CD4 receptor gene and a second transgenic nucleotide sequence encoding a human chemokine receptor gene.

2. The transgenic rodent of claim 1, wherein the rodent is selected from the group consisting of rat, mouse and hamster.

3. The transgenic rodent of claim 1, wherein the rodent is homozygous for human CD4.

4. The transgenic rodent of claim 1, wherein the rodent is homozygous for a human chemokine receptor.

5. The transgenic rodent of claim 1, wherein the chemokine receptor is selected from the group consisting of: CCR3, CCR5, CCR2B, CXCR4, CXR3, CCR8, GPR15, STRL33, APJ, and LTB_4.

6. The transgenic rodent of claim 5, wherein the chemokine receptor is CCR5.

7. The transgenic rodent of claim 1, wherein the transgenic rodent is further characterized by expression of a human gene encoding a sequence that interacts with an HIV sequence.

8. The transgenic rodent of claim 7, wherein the human gene that interacts with an HIV sequence is a subunit of human elongation factor P-TEFb.

9. The transgenic rodent of claim 8, wherein the human gene that interacts with an HIV sequence is Cyclin T.

10. An isolated cell derived from the rodent of claim 1.

11. An isolated rodent cell containing a first stably integrated nucleotide sequence encoding a human CD4 receptor gene and a second stably integrated nucleotide sequence encoding a human chemokine receptor gene.

12. A method of screening for biologically active agents that modulate phenomena associated with HIV infection, the method comprising:

combining a candidate agent with a transgenic rodent comprising an exogenous and stably transmitted human CD4 gene sequence and an exogenous and stably transmitted human chemokine receptor gene sequence; and

determining the effect of said agent on phenomena associated with HIV infection.

13. The method of claim 12, wherein the transgenic animal further comprises a transgenic nucleotide sequence encoding a human gene encoding a protein that interacts with an HIV sequence.

14. The method of claim 12, wherein the phenomenon associated with HIV infection is at least one selected from the group consisting of: viral adhesion to cells, viral integration, viral replication, T-cell depletion, associated opportunistic infections, cancerous alterations.

15. A method of screening for biologically active agents that modulate phenomena associated with HIV infection, the method comprising:

combining a candidate agent with a transgenic rodent cell culture, each cell of said culture comprising an exogenous and stably transmitted human CD4 gene sequence and an exogenous and stably transmitted human chemokine receptor gene sequence; and

determining the effect of said agent on phenomena associated with HIV infection.

16. The method of claim 15, wherein the transgenic rodent cell further comprises expression of a human gene encoding a protein that interacts with an HIV sequence.

17. The method of claim 15, wherein the transgenic rodent cell is a cell from a rodent selected from the group consisting of rat, mouse, and hamster.

18. A method of assessing the infectivity of an HIV isolate comprising;

(a) inoculating a first transgenic rodent expressing a human chemokine receptor and human CD4 with said HIV isolate;

(b) inoculating a second transgenic rodent expressing a human chemokine receptor and human CD4 with a representative HIV; and

(c) comparing the infectivity of the HIV isolate to a representative HIV.

19. The method of claim 18 wherein the transgenic rodent is selected from the group consisting of rat, mouse, and hamster.

20. The method of claim 18, wherein the HIV isolate is a strain of HIV-1.

21. A method of producing a therapeutic agent, comprising:

providing a transgenic rodent characterized by expression of a first transgenic nucleotide sequence encoding a human CD4 receptor gene and a second transgenic nucleotide sequence encoding a human chemokine receptor gene;

introducing a means for producing a therapeutic agent to the transgenic rodent; and

isolating the therapeutic agent from the transgenic rodent.

22. The method of claim 21, wherein the therapeutic agent is an antibody, the means for producing a therapeutic agent is a peptide, and wherein the peptide is introduced to the transgenic rodent by injection.

23. The method of claim 21, wherein the means for producing a therapeutic agent is a nucleic acid sequence, and wherein this nucleic acid sequence is introduced in an expression vector.

24. A therapeutic agent produced using the method of claim 21.

25. The therapeutic agent of claim 24, wherein the therapeutic agent is a vaccine.

26. A method for testing the activity of selected HIV sequences, comprising:

providing a transgenic rodent characterized by expression of a first transgenic nucleotide sequence encoding a human CD4 receptor gene and a second transgenic nucleotide sequence encoding a human chemokine receptor gene;

infecting the rodent with a virus, said virus comprising selected HIV sequences and sequences from a non-HIV virus; and

determining the effect of the selected HIV sequences on the transgenic rodent.

27. The method of claim 26, further comprising:

administering to the infected transgenic rodent a candidate agent; and

determining the effect of the candidate agent in the infected rodent.